

Remarks

Applicants have carefully reviewed the Final Office Action mailed on July 6, 2010. Applicants respectfully traverse (and do not concede) all objections, rejections, adverse statements, and adverse assertions made by the Examiner. Claims 1-4, 6-34, 43, 73-78 and 82-95 are pending in the application, with claim 19 being withdrawn from consideration and claims 1-4, 6-18, 20-34, 43, 73-78 and 82-95 being rejected. With this amendment, independent claims 1, 14 and 43 are amended. There is support for the claims amendment in the specification and drawings as originally filed, for instance, in the first sentence of paragraph 0049 of the published application. No new matter is added. Claims 1-4, 6-18, 20-34, 43, 73-78 and 82-95 are presented for examination. Favorable consideration of the above amendments and following remarks is respectfully requested.

Claim Rejections Under 35 U.S.C. §103

Claims 1-4, 6-18, 20-29, 31, 33-34, 43, 73-78, 82-84 and 88-95 are rejected under 35 U.S.C. §103(a) as being unpatentable over Grayzel in U.S. Patent No. 4,796,629 in view of Vigil et al. in U.S. Patent No. 5,336,234.

Regarding claims 1-4, 6-13, 73, 76, 82, 88-89 and 94, independent claim 1 is amended to recite “a repeatably inflatable and deflatable balloon” and “wherein portions of the balloon formed of the first material that are adjacent to the discrete strip form flaps between a furrow each time the balloon is deflated such that the cutting element is located in the furrow between flaps of the balloon.

In contrast, Grayzel discloses “an expandable balloon” (column 4, line 24) that appears to go from a collapsed state to an expanded state, but not disclose anything regarding deflation of the balloon, or any particular effects or features that occur when the balloon deflates. Therefore, Grayzel cannot teach or suggest “wherein portions of the balloon formed of the first material that are adjacent to the discrete strip form flaps between a furrow each time the balloon is deflated such that the cutting element is located in the furrow between flaps of the balloon”, as recited by amended independent claim 1.

In the Office Action, the Examiner relies on Vigil for teaching “the use of cutting elements that are disposed on a balloon (see figures 2-4) to further assist in dilation of a

stenotic portion of a vessel.” As such, Vigil cannot remedy the deficiencies of Grayzel in forming an obviousness rejection of amended independent claim 1.

For the reasons set forth above, Applicants respectfully submit that amended independent claim 1 is patentable over Grayzel. Vigil does not appear to overcome the shortcomings of the cited art. Consequently, Applicants respectfully submit that claim 1 is patentable over the combination of Grayzel and Vigil, to the extent that such a combination is even possible. Because claims 2-4, 6-13, 73, 76, 82, 88-89 and 94 depend from claim 1, they are also patentable for the same reasons as claim 1 and because they add significant elements to distinguish them further from the art.

Regarding claims 14-18, 20-29, 31, 33-34, 74, 77, 83, 90-91 and 95, independent claim 14 is amended to recite “a repeatably inflatable and deflatable balloon” and “wherein portions of the balloon formed of the first material that are adjacent to the discrete striped portion form flaps between a furrow each time the balloon is deflated such that the cutting element is located in the furrow between flaps of the balloon.”.

For reasons similar to those discussed for claim 1, Applicants assert that amended independent claim 14 is patentable over the combination of Grayzel and Vigil. Because claims 15-18, 20-29, 31, 33-34, 74, 77, 83, 90-91 and 95 depend from claim 14, they are also patentable for the same reasons as claim 14 and because they add significant elements to distinguish them further from the art.

Regarding claims 43, 75, 78, 84 and 92-93, independent claim 43 is amended to recite. “forming a repeatably inflatable and deflatable balloon from the tube” and “folding the balloon such that each time the balloon is deflated, the cutting element is located in a furrow of the balloon between flaps of the balloon formed of the first material which are adjacent to the discrete striped portion”.

For reasons similar to those discussed for claim 1, Applicants assert that amended independent claim 43 is patentable over the combination of Grayzel and Vigil. Because claims 75, 78, 84 and 92-93 depend from claim 43, they are also patentable for the same reasons as claim 14 and because they add significant elements to distinguish them further from the art.

Claims 30 and 85-87 are rejected under 35 U.S.C. §103(a) as being unpatentable over Grayzel in U.S. Patent No. 4,796,629 in view of Vigil et al. in U.S. Patent No. 5,336,234 and further in view of Roychowdhury in U.S. Patent No. 5,587,125.

As noted above, Applicants assert that independent claims 1, 14 and 43 are patentable over the combination of Grayzel and Vigil.

In the Office Action, the Examiner relies on Roychowdhury for teaching that “liquid crystal polymers may be used in balloons to provide exceptional tensile qualities (see column 5, lines 8-25).” As such, Roychowdhury cannot remedy the deficiencies of Grayzel and Vigil in forming an obviousness rejection of independent claims 1, 14 and 43. Because claims 30 and 85-87 depend from claims 1, 14 and 43, they are also patentable for the same reasons as claims 1, 14 and 43 and because they add significant elements to distinguish them further from the art.

Claim 32 is rejected under 35 U.S.C. §103(a) as being unpatentable over Grayzel in U.S. Patent No. 4,796,629 in view of Vigil et al. in U.S. Patent No. 5,336,234 and further in view of Spears in U.S. Patent No. 5,092,841.

In the Office Action, the Examiner relies on Spears for teaching “the use of an inorganic salt drug to provide treatment to the vessel (see column 7, lines 56-62).” As such, Spears cannot remedy the deficiencies of Grayzel and Vigil in forming an obviousness rejection of independent claim 14. Because claim 32 depends from claim 14, it is also patentable for the same reasons as claims 14 and because it adds significant elements to distinguish it further from the art.

Withdrawal of the obviousness rejections is respectfully requested.

Conclusion

Further examination and withdrawal of the rejections is respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is also respectfully requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

Lixiao Wang et al.

By their attorney,

Date: Sept. 1, 2010



Jason W. Burgmaier, Reg. No. 57,222
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, Minnesota 55403-2420
Telephone: (612) 677-9050
Facsimile: (612) 359-9349